

U. S. DEPARTMENT OF COMMERCE, ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION  
 IN COOPERATION WITH THE OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER  
 AND THE OHIO DEPARTMENT OF NATURAL RESOURCES - DIVISION OF WATER  
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20-33-20

LATITUDE 41°01'N  
 LONGITUDE 83°40'W  
 ELEV. (GROUND) 768 FT.

# CLIMATOLOGICAL SUMMARY

STATION: Findlay, Ohio

MEANS AND EXTREMES FOR PERIOD 1936-1965

MONTH	TEMPERATURE (° F)													PRECIPITATION TOTALS (INCHES)													MONTH					
	MEANS			EXTREMES				MEAN DEGREE DAYS **	MEAN NUMBER OF DAYS				MEAN	GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY	SNOW, SLEET				MEAN NUMBER OF DAYS									
	DAILY MAXIMUM	DAILY MINIMUM	MONTHLY	RECORD HIGHEST	YEAR	DAY	RECORD LOWEST		YEAR	DAY	90° AND ABOVE	32° AND BELOW							32° AND BELOW	0° AND BELOW	MEAN	GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY		MEAN	MAXIMUM MONTHLY	YEAR	GREATEST DAILY	YEAR
JAN	34.1	17.9	26.0	72	50	25	-19*	63	24	1202.	0	13	28	2	2.43	7.59	90	1.99	57	14	6.7	15.5	54	7.2	36	22	11	5	1.5	4	JAN	
FEB	36.6	19.4	28.0	72	44	26	-14*	63	26	1042.	0	9	28	1	2.26	5.28	90	1.08	59	10	5.6	14.9	62	8.0	62	23	10	5	1.1	4	FEB	
MAR	46.1	26.8	36.4	82	38	22	-15	48	12	881.	0	3	23	0	3.15	5.09	98	2.60	66	21	4.1	10.5	68	10.5	48	11	12	6	2.2	4	MAR	
APR	59.2	36.9	46.0	89*	48	26	12	44	4	511.	0	0	10	0	3.67	7.86	57	1.92	61	35	7	8.0	57	8	13	8	2.4	5	5	APR		
MAY	71.5	47.9	59.7	95	62	17	27	63	1	209.	0	0	0	0	2.61	3.48	43	2.44	65	22	0	10.5	57	8	10	7	3.0	1.1	6	6	MAY	
JUNE	80.9	57.5	69.7	101	44	28	38*	54	6	38.	4	0	0	0	3.24	3.06	39	4.27	57	25	0	10.5	57	8	10	7	3.0	1.1	6	6	JUNE	
JULY	84.8	60.8	72.8	104	36	14	43	45	11	6.	7	0	0	0	3.64	9.54	53	3.54	53	22	0	10.5	57	8	9	6	2.5	9	7	7	JULY	
AUG	83.5	59.3	71.4	102	51	31	38	65	29	14.	6	0	0	0	2.81	6.21	47	1.98	62	28	0	10.5	57	8	10	5	2.0	6	7	8	AUG	
SEPT	76.9	51.6	64.2	102	39	15	29*	59	18	116.	2	0	0	0	2.53	7.60	59	5.27	60	1	0	10.5	57	8	10	4	1.5	5	6	7	SEPT	
OCT	65.5	41.3	53.4	92	39	8	15	52	21	367.	0	0	0	0	2.63	6.79	41	2.38	61	6	0	10.5	57	8	10	5	1.7	6	6	8	OCT	
NOV	49.5	30.7	40.1	80	30	1	-3	58	30	743.	0	0	18	0	2.41	6.14	48	2.16	58	17	1.9	14.0	50	6.5	50	25	10	5	1.3	3	9	NOV
DEC	37.2	21.3	29.2	68	56	6	-17	50	27	1104.	0	10	26	1	2.06	4.45	51	1.36	57	7	5.4	14.7	44	6.5	64	2	10	5	1.1	2	10	DEC
YEAR	60.4	39.2	49.8	104	36	14	-19	63	23	623.	19	37	208	4	35.44	9.54	53	6.25	59	1	24.3	15.5	64	10.5	46	11	120	69	23.	6.	YEAR	

\*\* BASE 65° F \*ALSO ON EARLIER DATES, MONTHS, OR YEARS

## NARRATIVE CLIMATOLOGICAL SUMMARY

Findlay is located along the banks of the Blanchard River near the center of Hancock County in northwest Ohio. Terrain within Hancock County is relatively flat; the elevation of the earth's surface above sea level varies from about 710 to 950 feet. A map of the physiographic regions of Ohio shows Hancock County to be a part of Ohio's Lake Plains and Till Plains. During the glacial age, the shoreline of old Lake Maumee went through Hancock County. Much of the best agricultural land in Ohio is found within Hancock County.

The climate of Findlay is classified as continental. Such a climate is a characteristic of the interior of a landmass the size of North America. It is marked by large annual, daily, and day to day ranges of temperature. The annual extremes of temperature normally occur soon after June 21 and December 22. In Hancock County, summers are moderately warm and humid with occasional days when temperatures exceed 90°; winters are reasonably cold and cloudy with an average of 4 days with sub-zero temperatures. Weather changes occur every few days from the passing of cold or warm fronts and their associated centers of high and low pressure.

Normal mean temperature for the year is one degree below the average for northwestern Ohio. The normal daily range in temperature is greatest in late summer and least in winter. Extreme temperature range (record high minus record low) during the period 1936-1966 is 123 degrees. Coldest month of record during the above mentioned period is January 1963. In that month, daily maximum temperatures were below freezing on 21 days while sub-zero temperatures were recorded on 11 days. Maximum temperatures below freezing occur most frequently from mid-December through February. Warmest month of record during the period 1936-1966 is July 1955. In that month, the daily maximum temperature exceeded 89°F on 20 days while the daily minimum was 70°F or more on 7 days. Temperature in excess of 89°F has been recorded as early as May 10; however, such days are more common in the period June through August.

Heating degree days, as shown in the above table, are a measure of the departure of the mean daily temperature from 65°F. The daily totals are accumulated from July 1 through June 30. At any point during the year, the accumulated degree days can be used as an index of past temperature effect upon power consumption and fuel consumption for heating of homes and businesses.

Taking the number of days between the last freezing temperature (32°F) of spring and first freezing temperature in fall as the crop-growing season, this season averages 158 days in length. The growing season is 179 days or more in 10% of the years, 166 days or more in 30% of the years, less than 149 days in 30% of the years, and less than 137 days in 10% of the years. Temperatures of 32°F or less have been recorded as late as May 27 in spring and as early as September 17 in fall.

As is characteristic of continental climates, precipitation in the Findlay area varies widely from year to year; however, it is normally abundant and well distributed throughout the year with fall being the driest season. The average annual precipitation of 35.44 inches is about one and one half inches above the mean for northwestern Ohio. Showers and thundershowers account for most of the rainfall during the growing season. Thunderstorms occur on about 40 days each year. Most of these occur May through August. Snowfall averages about 25 inches a year although during the period 1936-1966 as little as 11 inches fell during the winter of 1948-49 and as much as 49 inches fell during the winter of 1950-51. As is typical of much of Ohio, most precipitation during the winter months comes in the form of rain.

Evaporation is greatest during the warm months and is then most critical for agriculture. During the period May through September, potential evaporation exceeds the normal rainfall by about 11 inches. During the driest growing season of record, 1944, the potential evaporation exceeded the rainfall by more than 17 inches. When evaporation exceeds rainfall for prolonged periods, a drought may occur; however, severe droughts seldom occur in Hancock County.

Humidity, cloudiness, sunshine and wind observations are not recorded at the Findlay Sewage Plant observation site; however, estimates of these variables can be made from observations taken at other locations. Relative humidity, the ratio between the amount of moisture in the air and the amount which could be present, without condensation, at the same temperature and pressure, is an important factor in human and animal comfort and in the growth and development of vegetation. Generally, humidity rises and falls inversely with the daily temperature and is lowest in summer and highest in winter. For the year, relative humidity averages 81% at 1 AM, 81% at 7 AM, 59% at 1 PM, and 68% at 7 PM. Cloudiness is greatest in winter and least in summer. This variation is most clearly illustrated by the percentage of possible sunshine which is 71% in July and 33% in December. Heavy fog occurs about 7 times each year and is most frequent during the cold half of the year. Death from smog is unknown. During the summer, the wind near the ground blows most frequently from the southwest, averaging 9 mph. In winter, the prevailing direction is west-southwest, averaging 12 mph. Damaging winds occur most often during spring and summer. Such storms are usually associated with migrating thunderstorms.

The tornado, one of the most destructive of all atmospheric storms, is characterized by a violently rotating column of air which is nearly always observable as a "funnel cloud". It frequently leaves great destruction along a narrow path, and is usually accompanied by heavy rain and hail, and often by lightning and thunder. Since 1900, 7 such storms have been reported in Hancock County. During the last decade, Ohio has averaged slightly more than 11 tornadoes a year.

May 1967

Marvin E. Miller  
 ESSA Weather Bureau State Climatologist  
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### PROBABILITY OF FREEZES OCCURRING AS LATE IN THE SPRING OR AS EARLY IN THE FALL AS DATES SHOWN IN THE FOLLOWING TABLE

PERCENT CHANCE OF LATER DATE IN SPRING	TEMPERATURE LEVELS											
	16°	20°	24°	28°	32°	36°	40°	44°	48°	52°	56°	60°
90	FEB 24	MAR 7	MAR 21	APR 5	APR 16	APR 27						
70	MAR 7	MAR 18	MAR 30	APR 13	APR 25	MAY 5						
50	MAR 16	MAR 25	APR 6	APR 18	MAY 1	MAY 11						
30	MAR 22	APR 1	APR 12	APR 23	MAY 7	MAY 17						
10	APR 1	APR 11	APR 21	APR 30	MAY 16	MAY 26						
PERCENT CHANCE OF EARLIER DATE IN FALL												
10	NOV 12	NOV 1	OCT 20	OCT 9	SEPT 22	SEPT 17						
30	NOV 22	NOV 11	OCT 29	OCT 19	OCT 1	SEPT 23						
50	NOV 28	NOV 18	NOV 4	OCT 26	OCT 6	SEPT 27						
70	DEC 5	NOV 25	NOV 10	NOV 1	OCT 12	OCT 1						
90	DEC 14	DEC 5	NOV 18	NOV 11	OCT 21	OCT 7						

### STATION HISTORY

DATE	LOCATION (From Post Office)	ELEVATION (FT. MSL)	OBSERVER
3/1886 - 4/1887	Unknown	-	J. W. Zellersner
4/1889 - 2/1896	Unknown	-	A. C. Redding
3/1896 - 7/1896	Unknown	-	S. A. Graves
8/1896 - 10/1927	0.6 miles SW	776	E. A. Moser
10/1927 - 7/1929	1.0 miles N	781	R. E. Long
7/1929 - 1/1930	0.3 miles E	782	L. Martz
1/1930 - 9/1930	1.0 miles SW	782	R. Bogart
9/1930 - 2/1931	1.0 miles SE	782	C. A. Heistand
3/1931 - 9/1934	0.2 miles W	782	H. Coates
9/1934 - 6/1959	1.0 miles	768	B. H. Barton
7/1959 - 5/1960	1.0 miles	768	C. B. Crosbytt
6/1960 - Present	1.0 miles	768	K. C. Fry

AVERAGE TEMPERATURE (° F)

YR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNU
36	20.2	18.4	40.5	44.1	52.3	67.7	75.7	75.3	68.1	52.2	35.6	23.4	49.5
37	31.5	28.3	32.4	47.3	56.6	67.6	72.8	61.2	49.2	31.7	21.0	41.8	47.9
38	31.0	34.2	43.5	50.1	60.0	70.8	73.2	66.8	54.5	43.0	27.0	31.8	47.8
39	31.5	50.0	31.7	42.0	53.1	62.9	72.4	72.0	69.8	59.5	32.5	32.2	48.0
40	18.8	28.2	32.5	44.8	53.1	70.1	73.8	72.4	69.8	59.5	31.9	34.4	48.0
41	27.8	25.4	31.2	43.4	52.5	70.2	74.4	71.1	68.0	56.1	42.7	35.5	51.5
42	27.5	23.9	30.5	43.4	51.3	70.7	74.2	70.2	62.8	53.8	42.2	24.9	50.3
43	21.0	29.2	34.2	48.1	58.7	74.0	78.8	71.3	60.8	51.5	37.9	27.6	48.9
44	31.0	30.8	33.1	44.5	55.1	72.9	73.0	69.8	61.9	51.9	41.4	23.4	50.5
45	18.2	28.3	48.0	50.2	62.8	65.6	70.3	70.6	66.0	50.0	41.3	22.2	48.7
46	27.7	22.8	49.3	46.0	55.7	68.2	73.0	67.1	66.0	57.9	45.1	33.5	52.0
47	31.5	22.0	31.5	46.1	55.1	66.7	69.5	77.9	55.1	60.7	36.9	30.4	48.6
48	18.7	26.9	37.2	53.2	57.7	68.3	74.1	71.6	61.2	49.3	46.0	32.7	50.3
49	33.7	33.8	37.7	47.8	50.0	72.9	76.5	72.2	58.2	87.5	45.6	37.5	51.0
50	35.7	28.5	32.9	42.1	60.3	66.8	69.6	68.0	62.1	55.6	35.3	22.4	48.3
51	27.5	27.9	36.5	48.7	59.7	72.9	71.1	68.4	68.8	54.5	33.7	27.5	48.5
52	20.3	30.8	38.2	47.9	59.2	72.1	71.5	72.7	62.8	53.0	42.2	32.1	48.0
53	27.5	25.2	32.2	45.1	54.5	70.8	71.3	68.5	66.0	52.9	35.3	25.2	48.9
54	27.5	30.2	38.1	52.0	52.5	67.3	78.1	75.8	66.7	53.9	37.3	26.9	51.5
55	25.9	30.2	38.1	52.0	52.5	67.3	78.1	75.8	66.7	53.9	37.3	26.9	51.5
56	24.4	29.4	35.7	45.8	58.5	69.7	72.3	71.8	63.2	58.1	40.3	36.3	50.3
57	21.0	32.7	37.4	50.2	59.2	69.7	73.4	71.6	63.7	50.6	40.9	34.5	58.4
58	28.0	22.1	35.8	48.9	58.9	64.5	72.5	70.1	63.8	53.1	41.9	20.7	48.3
59	22.1	27.9	35.5	48.2	63.6	68.9	72.1	74.8	66.0	51.0	34.7	22.4	48.8
60	27.8	25.6	24.2	52.7	58.2	67.4	70.3	72.4	61.1	53.2	42.6	24.4	48.8
61	22.2	33.7	41.3	44.0	55.4	67.5	72.5	71.5	65.5	54.7	40.5	27.2	50.0
62	21.8	25.4	33.8	48.4	56.2	70.9	71.0	71.3	63.3	33.2	39.2	48.7	48.7
63	18.1	17.8	38.2	48.2	56.5	69.4	71.0	66.0	61.1	58.9	42.4	19.9	41.2
64	23.3	26.6	31.0	50.1	64.2	70.0	70.0	69.3	68.4	49.3	44.2	30.7	50.0
65	28.2	27.4	30.6	41.1	65.8	68.8	70.2	68.8	65.9	50.6	41.7	36.3	50.0
66	21.1	27.8	39.1	48.2	58.1	69.8	73.4	68.7	60.6	48.0	40.7	29.1	48.2

TOTAL PRECIPITATION (INCHES)

YR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNU
36	1.19	2.66	3.37	2.09	2.71	1.92	2.14	1.68	3.03	5.04	1.90	2.16	39.76
37	6.37	2.72	1.85	1.23	3.25	3.87	5.84	2.82	2.63	4.28	3.25	1.86	42.54
38	2.59	3.89	3.99	4.28	3.68	3.48	2.06	2.41	2.57	3.65	3.52	1.01	35.47
39	1.24	1.96	1.86	6.57	3.22	6.54	5.4	2.06	1.65	2.99	2.45	3.48	33.98
40	1.20	2.81	3.06	1.15	5.48	3.80	3.12	3.34	1.59	6.70	1.38	1.70	29.51
41	1.20	2.81	3.06	1.15	5.48	3.80	3.12	3.34	1.59	6.70	1.38	1.70	29.51
42	1.45	1.45	2.44	2.66	8.18	4.26	7.08	3.63	4.80	1.75	1.24	3.38	30.16
43	1.45	1.54	3.85	4.00	2.11	3.61	1.89	2.40	4.92	1.90	2.80	1.91	27.44
44	1.79	1.74	5.13	3.13	4.07	6.42	3.02	.98	5.23	2.43	1.74	3.07	37.75
45	.78	1.72	1.05	.72	5.68	7.17	.92	1.89	1.29	3.04	2.52	2.87	29.25
46	3.59	4.41	1.91	4.83	4.82	7.22	2.50	6.21	3.05	2.75	1.85	1.89	41.03
47	2.20	2.31	1.99	2.70	4.58	4.28	3.01	2.26	3.16	2.29	4.77	2.10	44.28
48	2.82	2.28	2.71	2.54	4.68	3.88	2.56	2.54	2.46	1.81	4.72	2.11	35.92
49	7.59	3.38	2.65	3.10	3.74	4.88	3.74	4.29	4.51	4.04	4.04	2.01	43.99
50	2.28	3.34	3.46	4.61	3.62	3.71	4.34	.67	2.38	2.57	3.31	3.86	31.86
51	3.67	2.07	3.79	4.16	4.29	1.06	2.36	1.84	2.60	.87	2.22	2.44	31.57
52	2.55	1.17	2.61	2.68	5.45	2.82	9.54	1.96	1.27	.61	1.81	1.26	33.77
53	2.67	2.69	3.24	4.44	1.97	1.91	4.28	5.52	1.35	5.82	1.63	1.46	38.99
54	2.27	2.24	5.22	2.06	2.19	1.80	3.34	2.80	1.65	5.32	4.49	.59	33.98
55	1.67	2.96	4.67	2.67	5.43	2.32	2.73	4.57	.54	.69	1.81	2.62	32.74
56	2.30	1.77	.88	7.86	4.19	7.16	1.03	1.91	5.65	4.13	2.81	4.04	43.53
57	1.68	4.47	.90	3.43	5.14	5.91	5.53	3.21	3.65	4.73	6.74	.33	35.12
58	4.37	4.80	2.88	5.24	2.43	3.02	5.08	2.43	7.60	4.75	3.71	2.84	49.15
59	3.14	2.62	.80	1.59	3.57	3.33	2.18	.96	1.46	1.64	1.08	1.08	25.39
60	.24	3.77	4.57	6.90	2.15	2.36	3.53	3.07	2.62	1.26	2.69	1.26	34.22
61	3.94	2.05	1.98	1.93	2.26	1.86	6.48	2.68	2.48	2.94	2.11	1.24	31.84
62	1.23	1.61	4.89	2.86	2.16	3.22	5.82	1.94	1.28	.68	1.16	2.78	30.75
63	1.70	1.00	2.97	3.96	3.81	2.20	2.17	3.63	3.61	3.45	2.46	2.83	38.67
64	1.70	2.97	3.96	3.81	3.81	2.20	2.17	3.63	3.61	3.45	2.46	2.83	38.67
65	1.70	2.97	3.96	3.81	3.81	2.20	2.17	3.63	3.61	3.45	2.46	2.83	38.67
66	.51	1.70	1.19	2.90	2.87	2.77	9.34	3.69	2.89	1.25	5.35	3.88	38.42

MONTHLY AND SEASONAL SNOWFALL

SEASON	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	TOTAL
36-37	.0	.0	1.8	2.2	4.5	2.2	1.5	.0	.0	12.2
37-38	.0	.0	1.2	.5	5.0	1.0	.0	.0	.0	11.7
38-39	.0	.0	4.0	3.2	15.0	6.5	2.7	.0	.0	28.7
39-40	.0	.0	.0	.0	12.0	8.0	2.7	.0	.0	29.0
40-41	.0	.0	1.0	1.2	7.2	7.0	3.8	.0	.0	20.2
41-42	.0	.0	.5	.5	6.3	1.0	12.6	.0	.0	26.9
42-43	.0	.0	5.0	9.3	13.9	3.7	5.0	.0	.0	34.9
43-44	.0	.0	2.2	10.2	10.0	10.0	1.0	.0	.0	42.0
44-45	.0	.0	2.0	15.7	12.6	9.4	2.5	.0	.0	58.2
45-46	.0	.0	3.0	10.5	5.9	3.0	.0	.0	.0	20.0
46-47	.0	.0	.0	.0	9.0	7.3	9.5	.0	.0	28.8
47-48	.0	.0	2.0	5.5	4.0	10.5	.0	.0	.0	28.5
48-49	.0	.0	.0	1.4	3.5	1.0	5.5	.0	.0	11.4
49-50	.0	.0	.5	.5	4.5	4.5	3.0	.0	.0	12.4
50-51	.0	.0	14.0	12.8	10.7	3.0	9.0	.0	.0	49.5
51-52	.0	.0	2.0	13.7	4.5	5.5	.5	.0	.0	26.2
52-53	.0	.1	5.1	5.1	5.1	4.2	2.0	.0	.0	16.5
53-54	.0	.0	3.3	4.5	2.4	9.0	3.7	.0	.0	22.9
54-55	.0	.0	3.0	2.1	5.0	3.6	4.7	.0	.0	18.4
55-56	.0	.0	1.4	1.6	15.0	5.6	8.6	1.5	.0	30.7
56-57	.0	.0	1.1	7.6	13.4	1.8	1.0	8.0	.0	32.9
57-58	.0	.0	2.0	6.5	7.5	4.5	.0	.0	.0	33.5
58-59	.0	.0	4.2	1.7	6.6	7.0	6.5	.0	.0	30.8
59-60	.0	.0	2.0	9.0	2.0	4.0	.0	.0	.0	19.0
60-61	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
61-62	.0	.0	.0	.0	5.0	4.5	3.2	.0	.0	27.6
62-63	.0	.0	1.0	7.5	3.0	2.5	.0	.0	.0	17.0
63-64	.0	.0	.5	6.3	4.4	5.5	.0	.0	.0	32.7
64-65	.0	.0								